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ULTRASONIC AGITATION-ASSISTED
DEVELOPMENT OF RESIST LAYER OF
MASTER STAMPER/IMPRINTER

ABSTRACT OF THE DISCLOSURE

A method of forming a topographical pattern in a surface of a resist layer, comprising sequential steps of:

- (a) providing a substrate having a surface;
- (b) forming a desired thickness resist material layer on the substrate
- 5 surface;
- (c) subjecting selected areas of the surface of the resist layer to exposure to an energy beam to form therein a latent image of a desired topographical pattern to be formed therein;
- (d) contacting the surface of the resist layer with a liquid developing
- 10 solution comprising a preselected solvent for developing the latent image into the desired topographical pattern while simultaneously supplying ultrasonic energy thereto, the combination of supplying the ultrasonic energy to the preselected solvent providing an increased developing interval and improved image contrast between the exposed and unexposed areas of the layer of resist material, relative
- 15 to when the liquid developing solution does not comprise the preselected solvent and the ultrasonic energy is not supplied thereto.